This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-22. (canceled)

23. A method of sealing a blood vessel, comprising the steps of:

providing a catheter including an elongate body, a pair of inflatable balloon members on the elongate body, and an electrode array on the elongate body between the balloons;

positioning the catheter within a blood vessel;

inflating the balloon members into contact with an interior wall of the blood vessel;

removing blood from the portion of the blood vessel extending between the inflated balloon members; and

energizing the electrode array to cause ablation of the interior wall of the blood vessel and, during the energizing step, applying suction in the region between the inflated balloon members to remove moisture released during ablation, said suction substantially preventing formation of a low-impedance liquid layer around the electrodes when ablation is carried out using the electrodes.

24. The method of claim 23, wherein in the applying step the suction collapses the vessel, thereby drawing the interior wall into contact with the electrode array.

25. The method of claim 23, wherein the catheter elongate body includes a plurality of openings, and wherein the vacuum is applied through the openings.

26. The method of claim 23, wherein suction is applied through the catheter during the applying step.

27. The method of claim 26, wherein the catheter elongate body includes a plurality of openings, and wherein the suction is applied through the openings.

28. The method of claim 23, wherein the removing step includes flushing the portion of the blood vessel extending between the balloon members with saline, and aspirating blood and saline from the said portion of the blood vessel.

29. The method of claim 23, wherein the catheter elongate body includes a plurality of openings, and wherein the removing step includes applying a vacuum to the catheter to aspirate the blood out of the vessel through the openings.

30. The method of claim 23, wherein the electrode array is a bipolar array.

31. The method of claim 23, wherein the method further includes the steps of, prior to energizing the electrode array to cause ablation:

positioning the electrode array in contact with the interior wall of the blood vessel and measuring impedance of the tissue in contact with the electrode array; and

automatically selecting between a low impedance transformation circuit and a high impedance transformation circuit based on the impedance of the tissue in contact with the electrode array.

32. The method of claim 31, wherein the step of measuring the impedance of the tissue in contact with the electrode array includes providing a low-power RF signal to the electrode array.

33. The method of claim 31, wherein the step of selecting includes selecting the transformation circuit having an impedance closest to the measured impedance of the tissue in contact with the electrode array.

34. The method of claim 23, wherein the energizing step causes flow of current into the tissue, and wherein the method further includes the step of causing automatic termination of current flow into the interior wall once a selected ablation depth has been approximately reached.

35. The method of claim 34, wherein said termination occurs regardless of whether the electrode array continues to be energized.

36. The method of claim 23, further comprising the step of compressing the blood vessel, causing opposed ablated regions of the interior wall to seal against one another.

37. The method of claim 23, further the step of collapsing the catheter into a reduced diameter step and withdrawing the collapsed catheter from the vessel.

38. The method of claim 37, wherein the collapsing step includes the step of applying a vacuum to a lumen in the catheter.